

Remarks

Applicants understand that Applicants cannot, as a matter of right, amend any finally rejected claim, add new claims, or reinstate previously canceled claims after a final Office Action. However, according to MPEP §714.13, amendments that cancel claims, adopt Examiner suggestions, remove issues for appeal, or in some other way require only a cursory review by the Examiner may be considered. In this regard, Applicants submit that claims 1, 6, 8, 14, and 20 have been amended for grammatical reasons. Claim 7 was canceled without prejudice in a previous Amendment. Accordingly, Applicants submit that the subject matter of amended claims 1, 6, 8, 14, and 20 has already been searched and considered by the Examiner and that only a cursory review of the cited reference is necessary to determine the patentability of the pending claims.

In addition, Applicants respectfully submit that the above-requested amendments to claims 1, 8, 14, and 20 are proper despite the finality of the outstanding Office Action because the amendments place the application in condition for allowance and/or place the application in better form for appeal. No question of new matter arises and entry of the above-requested amendments is respectfully requested.

Claims 1-6 and 8-20 are before the Examiner for consideration.

Rejection under 35 U.S.C. 112, first paragraph

Claims 1-6 and 8-13 have been rejected under 35 U.S.C. §112, first paragraph, for failing to comply with the written description requirement. In particular, the Examiner asserts that the claim limitation that the composition “contains no lithium oxide other than trace impurities” does not have support in the originally filed application. Additionally, the Examiner states that although the specification as originally filed states that the composition contains no lithium oxide, that is not the same as the phrase “no lithium oxide other than trace impurities” recited in claims 1 and 8.

In response to this rejection, Applicants submit that the phrase “contains no lithium oxide other than trace impurities” is supported by the application at least on page 6, lines 5-7, which recites that that “the molten glass feeding the bushings is obtained from pure batch materials or, more usually, natural batch materials (*i.e.*, those possibly containing trace impurities)”. It is respectfully submitted that these impurities may be derived from any number of sources and may include, for example, very small (*i.e.*, trace) amounts of lithium or lithium oxide. Indeed, it is virtually impossible to remove all trace elements from a glass

composition. Applicants respectfully submit that the presence of “trace impurities”, such as the claimed trace impurities of lithium oxide, may in fact be present in the glass composition. In view of the above, Applicants submit that there is adequate support in the specification for the claimed recitation of “no lithium oxide other than trace impurities” in claims 1 and 8. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

Rejection under 35 U.S.C. 112, second paragraph

Claims 1-6 and 8-13 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Examiner asserts that the phrase “trace impurities” is unclear.

In response to this rejection, Applicants initially submit that the phrase “trace impurities” is an art recognized phrase and is easily understood by those of skill in the art and, as such, needs no specific, recited definition within the application. Notwithstanding this implicit understanding, Applicants submit that the specification as filed teaches that “an impurity” of an element can be present in the composition in an amount from 0 to 0.6%. (See page 4, lines 21-22 of the specification). Thus, Applicants submit that the term “trace impurities” is not only understood by those of skill in the art, it is defined in the application as being an amount from 0-0.6%. Accordingly, Applicants respectfully submit that independent claims 1 and 8, and all claims dependent therefrom, are sufficiently definite and respectfully request reconsideration and withdrawal of this rejection.

Rejection under 35 U.S.C. §§102(a) and (e)/103(a)

Claims 1-6 and 8-20 have been rejected under 35 U.S.C. §102(a) and (e) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) under U.S. Patent Publication No. 2004/0092379 to Lewis (“Lewis”). In particular, the Examiner asserts Lewis teaches a glass composition for forming glass fibers that includes SiO₂, Al₂O₃, CaO, and MgO in amounts that at least anticipate the claimed invention. It is also asserted that Lewis teaches amounts of lithium oxide in a range of 0-9%. The Examiner admits that Lewis does not teach the T liquidus temperature, the claimed Young’s Modulus, or T log=4. However, it is asserted that since Lewis teaches a glass composition and yarn having the same components present and in the same amounts, it is reasonable to expect that the material of Lewis would possess the same properties.

Applicants' Response

In response to this rejection, Applicants respectfully direct the Examiner's attention to the amendments made to independent claims 1, 8, and 14 and submit that claim 1 teaches a glass reinforcing yarn, claim 8 teaches a glass composition suitable for producing glass reinforcing yarns, and claim 14 teaches a glass yarn that is not taught or suggested by Lewis. In particular, Applicants submit that Lewis does not teach or suggest a glass composition that has a CaO content from 13-14.9% as required by claims 1, 8, and 14.

Applicants acknowledge that Lewis discloses a second generic glass composition that contains a broad range for CaO, namely from 3-15 wt%.¹ (See the Table on page 3 positioned between paragraphs [0042] and [0043]). However, looking at each of the illustrative examples set forth in Lewis, it can be seen that *each and every* exemplary embodiment contains CaO in an amount much less than 13%. For instance, Example 1 contains 8.27 wt% CaO, Example 2 contains 7.71 wt% CaO, Example 3 contains 7.70 wt% CaO, Example 4 contains 9.61 wt% CaO, Example 5 contains 8.38 wt% CaO, Example 6 contains 6.74 wt% CaO, Example 7 contains 6.53 wt% CaO, Example 8 contains 6.74 wt% CaO, Example 9 contains 6.23 wt% CaO, Example 10 contains 5.28 wt% CaO, and Examples 11 and 12 each contain 6.70 wt% CaO.

Applicants respectfully submit that to evaluate the obviousness or non-obviousness of an invention, both the prior art reference(s) and the claimed invention as a whole must be considered.² Looking at Lewis *as a whole*, Applicants submit that Lewis actually teaches the inclusion of CaO in an amount far less than the claimed amount of 13-14.9%. Indeed, in each of the disclosed "exemplary embodiments", CaO was present in the glass composition in an amount less than or equal to 9.61 wt%. (See, e.g., Example 4 in paragraph [0033], which contains a maximum amount of 9.61 wt% CaO). Indeed, nowhere in Lewis is there any specific teaching of the inclusion of CaO in an amount from 13-14.9% as required by each of claims 1, 8, and 14. In addition, it is respectfully submitted that Lewis actually teaches away from the claimed amount of CaO. Applicants submit that one of skill in the art reading Lewis

¹ Applicants note that a first generic glass composition disclosed in the table positioned between paragraphs [0029] and [0030] discloses a range of 3.76 to 10.5 wt% for CaO. It is respectfully submitted that this range is clearly outside the claimed range of 13-14.9%.

² See, e.g., *Manual of Patent Examining Procedure*, Patent Publishing, LLC, Eighth Ed., Rev. 7, August 2008, §2141.02 citing *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983) and *Schenck v. Norton Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983).

would be inclined to utilize CaO in an amount less than about 10 wt% CaO given that the largest amount of CaO present in the examples of Lewis is 9.61 wt%.

Additionally, Applicants respectfully submit that there is no motivation for one of skill in the art to arrive at the glass reinforcing yarn of claim 1, the glass composition suitable for producing glass reinforcing yarns of claim 8, or the glass yarn of claim 14 based on the teaching of Lewis. In order to establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings, and the prior art reference (or references when combined) must teach or suggest all the claim limitations.³

It is respectfully submitted that one of ordinary skill in the art would have no motivation to derive a glass composition that contains CaO in an amount from 13-14.9% based on the teaching of Lewis at least because Lewis specifically and clearly teaches the inclusion of CaO in an amount far less than the claimed amount of 13-14.9%, as is demonstrated by each of the disclosed “exemplary embodiments”. Indeed, it is respectfully submitted that CaO is present in the glass compositions of Lewis in amounts less than or equal to 9.61 wt% and that Lewis teaches away from the claimed compositions that contain CaO in an amount from 13-14.9%. Furthermore, Applicants submit that, looking at the teaching of Lewis as a whole, it would *not* be obvious to one of skill in the art to arrive at a glass composition that includes CaO in an amount from 13-14.9% as claimed in claims 1, 8, and 14. Applicants respectfully submit that without some teaching or suggestion, there can be no motivation, and without motivation, there can be no *prima facie* case of obviousness.

Further, Applicants agree with the Examiner that Lewis does not disclose the claimed Young’ Modulus. (See, e.g., page 3, lines 18-19 of the Office Action dated November 11, 2009). Accordingly, it is respectfully submitted that claims 1, 8, and 14, and all claims dependent therefrom, are not anticipated by (or obvious over) Lewis for this additional reason.

In view of the above, Applicants respectfully submit that independent claims, 1, 8, and 14 are not taught or suggested by Lewis. With respect to dependent claims 2-6, 9-13, and 15-20, Applicants submit that because independent claims 1, 8, and 14 are not taught or suggested by Lewis and claims 2-6, 9-13, and 15-20 are dependent upon one of claims 1, 8,

³ See, e.g., *Manual of Patent Examining Procedure*, Patent Publishing, LLC, Eighth Ed., Rev. 7, August 2008, §2143 citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007).

or 14 and contain the same elements as the claim from which they depend, dependent claims 2-6, 9-13, and 15-20 are also not taught or suggested by Lewis.

In light of the above, Applicants submit that claims 1-6 and 8-20 are not anticipated by, or obvious over, Lewis and earnestly request reconsideration and withdrawal of this rejection.

Double Patenting Rejection

Claims 1-6 and 8-20 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-6 and 12-15 of co-pending application USSN 11/722,039 to Lecomte ("Lecomte"). In particular, the Examiner asserts that although the conflicting claims are not identical, they are not patentably distinct from each other because Lecomte claims a composition having overlapping ranges of the same constituents. The Examiner asserts that although the claims of Lecomte include lithium oxide, it is present in amounts from 0.1-0.8, which indicates that the material is substantially free of lithium.

Applicants' Response

Applicants respectfully submit that this rejection is premature as the copending application has yet to be fully examined and the pending claims have not yet been allowed. In this regard, Applicants respectfully request that this rejection be held in abeyance until the indication of allowable subject matter.

Conclusion

In light of the above, Applicants believe that this application is now in condition for allowance and therefore request favorable consideration.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

If necessary, the Commissioner is hereby authorized to charge payment or credit any overpayment to Deposit Account No. 50-0568 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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